

OBITUARY



Carl Muesebeck in the 1920s



Carl Muesebeck in 1976

Carl Frederick William Muesebeck
1894-1987

Honorary President, Entomological Society of Washington,
1971-1987

The long career of Carl Muesebeck, one of the 20th century's most noted and productive entomologists, came to an end at age 93 on 13 November 1987. He was born 24 September 1894 in Medina, New York, to William and Marie Koch Muesebeck. Both parents emigrated to America in the 1880s. William (christened Carl Friedrich Wilhelm Muesebeck¹), came from Stettin, Pomerania, in eastern Germany (now part

of Poland), and Marie from Angermunde, northeast of Berlin. They met and were married in America. The father served an apprenticeship as a tailor in Stettin, and worked as a tailor in Medina, later moving to Brockport to establish his own tailoring business. The parents were Lutheran and Carl was brought up in that faith. He left the church after college, not caring for formal ritual, but had a deep and abiding belief in God throughout his life.

Carl attended elementary school in Medina and then Brockport High School. He also helped in his father's tailoring business, and greatly enjoyed working on a farm for six months after high school graduation.

He entered Cornell University in 1912,

¹ Carl's first cousin, Carl W. Muesebeck, traces the Muesebeck ancestry as far back as the 10th century, the family name being variously spelled Musbach, also Muespach, and later Meusebach. A patent (or charter) of nobility was conferred in 1690 on Johann Gregor von Meusebach, Imperial Aulic Counselor, and Lord Lieutenant and Treasurer of Upper and Lower Saxony.

and was impressed at once by the Victorian inscription on the gates of what was at that time the principal entrance to the university: "So enter that daily thou mayest become more learned and more thoughtful; so depart that daily thou mayest become more useful to thy country and to mankind." This admonition guided Carl's subsequent life, and he quoted it admiringly to friends. He thought that he might prepare himself to become a professor of English, and he was also keenly interested in mathematics. During his later undergraduate years he excelled in tutoring foreign born students at Cornell in English.

He had no particular interest in natural history when he began his studies at Cornell, but several courses under the inspired teaching of John Henry Comstock and his wife, Anna Botsford Comstock, were a revelation to young Carl. Comstock was the founder of the first department of entomology in an American university, and his wife was a gifted teacher also, but of general natural history. Carl once told a reporter that Comstock "made the study of insects sound so fascinating that I switched to entomology."

Carl received a Bachelor of Science degree in 1916. Inspired by his love of entomology, he applied for and received his first professional appointment in December, 1916, from the U.S. Department of Agriculture (USDA) in the laboratory of the Bureau of Entomology at Melrose Highlands, Massachusetts. He served there for nearly two years in the grade of Scientific Assistant, working on a biological study of the parasites of the introduced gypsy and brown-tail moths.

He resigned from USDA in August, 1918, to return to Cornell where he registered for a doctorate. His graduate committee consisted of Professors R. Matheson (insect parasitology), J. C. Bradley (systematics), and Moore (middle initials unknown, in bacteriology). Moore was later replaced by O. A. Johannsen (morphology) when Carl

changed his minor in bacteriology to parthenogenesis in insects. He also served as an instructor in entomology at Cornell with the responsibility for conducting courses in biological control of insects and in taxonomy of parasitic Hymenoptera. The need to provide more adequate support for his family led him to terminate his graduate studies, just a semester short of completing the mandatory residency requirements for the doctorate. His doctoral thesis, the large revision of North American *Apanteles* (#3)², carried the byline, "C. F. W. Muesebeck, Instructor in Entomology, Cornell University." He mentioned in the introductory paragraph that the contribution was the result of studies made during a temporary USDA appointment in the summer of 1919 to work on the great mass of valuable material in the collection at the U.S. National Museum, and that contributory data had been obtained earlier during his work at the Melrose laboratory and during the winter and spring of 1918-1919 at Cornell.

He returned to the USDA laboratory at Melrose Highlands in April, 1921. For the next decade he conducted research on bio-systematics of parasitic Hymenoptera and directed the work of other employees in this field. His taxonomic studies during this period resulted in the completion and publication of additional large revisionary studies on the Braconidae (#4, 6, 7, and 10). Early in 1926 he was assigned temporarily for 2½ years to Budapest, Hungary, where he had the responsibility for directing USDA studies in Europe on the biology of European parasites of the gypsy and brown-tail moths. He accepted this assignment with the provision that he would be able to spend periods during the winter months traveling to various museums to study type specimens of earlier workers in parasitic Hymenoptera. These visits included the collections in Kiel, Dublin, London, Berlin and

² Numbers in parentheses refer to articles listed in the appended bibliography.

others. He travelled extensively in central Europe searching for effective parasites of these two forest pests, and was responsible for collecting, rearing and shipping the biologically effective species to America.

During the stay in Europe he received the first of a number of honors to be conferred during his lifetime, that of honorary membership in the Hungarian Entomological Society. His entomological career was memorialized at the 583rd meeting of that society on 19 February 1988.

In the fall of 1931 he was reassigned to Washington to serve as Assistant Leader of the Division of Insect Identification, USDA, with additional responsibilities of carrying on taxonomic research on several groups of parasitic Hymenoptera, primarily the Braconidae, Bethyloidea and Proctotrupoidea, and providing identification service in these groups. He also supervised the updating and development of the insect host-parasite card catalog that had been initiated by L. O. Howard. Most of the national collection of insects on which Carl worked was in the U.S. National Museum, now known as the National Museum of Natural History of the Smithsonian Institution (SI). In 1935 he became Leader of the Division of Insect Identification with his administrative office in the South Building, USDA, 5 minutes across the Mall from the Museum. He continued his research and identification work on parasitic Hymenoptera, and, as older staff members retired or died, he added identification and curatorial responsibility for lice, fleas and ticks to an already superhuman load. In connection with his work on these latter three groups of ectoparasites, he continued to add data to the card files of host-parasite lists, and made these files available to other investigators.

Carl was always a prodigious, dedicated and conscientious professional, working 12 to 14 hours or more on weekdays, and frequently additional hours on the weekend. The normal working period for USDA employees early in 1941 was 8:45 a.m. to 5:15

p.m. By the time all of us had arrived at the Museum, he would already have been working there from 6 a.m., and would have left for his administrative office by 8:30 a.m. Usually he returned at noon to have lunch with us in the cafeteria of the Internal Revenue Service Building across the street from the Museum, bringing with him specimens that required urgent identification or letters that had been typed for us in the South Building. He then went back to administrative work for the afternoon, returning to the Museum at 5 p.m. to spend another 3–4 hours over the microscope.

World War II imposed additional burdens on him, for some of the younger specialists in the Division, J. F. Gates Clarke, A. B. Gurney, D. G. Hall, K. V. Krombein, P. W. Oman and B. E. Rees, entered military service, most of them to serve as Army entomologists. A caring, warmhearted person, Carl wrote occasional lengthy personal letters to each of us to send news of what was happening at the Museum and what our colleagues in military service were doing. He looked forward with keen anticipation to receiving letters with news of our entomological activities in distant parts of the world. He even found time to write several times to the wife of one of our group to inquire about her wellbeing and that of a prematurely born child, and to ask for any recent news from her husband.

During the war he was able to bring to the Museum for shorter or longer periods such specialists as M. T. James, V. S. L. Pate and H. K. Townes, to curate parts of the collection and to provide identification service. Wartime transportation difficulties meant that he was one of the few people to continue working at the Museum on Sundays, usually between 8 a.m. and 3 p.m. Earlier on Sunday and again late in the afternoon, he visited the USDA research facility at Beltsville to care for the silkworms being reared there because no one else was available on that day to care for them.

He retired from Federal service in 1954,

having suffered a serious heart attack two years earlier. Upon his retirement he was appointed a Collaborator in the Insect Identification and Parasite Introduction Section, USDA, and a Research Associate in the Smithsonian Institution, the latter appointment enabling him to have an office and a parking space at the Museum. Relieved of the burden of administrative responsibilities, he continued industriously working over his microscope and cataloguing at the Museum seven days a week from early in the morning until noontime. After returning home, he continued work on other entomological projects such as editorial work and additional cataloguing. From 1962 until he left the Washington area in 1980 he was editor for *Entomological Review*, the translation of the important Russian periodical, *Entomologicheskoye Obozreniye*. With his usual meticulous attention, he mastered the difficult Russian language, thus ensuring that translations by the language experts made good entomological sense.

Carl's marriage in 1917, to Ida C. Praedel of Brockport, New York, ended with her death in 1975. An only son, Carl, Jr., died suddenly from a brain tumor at age 16 in 1935. The loss of their gifted son was a grievous blow to Carl and Ida. For many years he took fresh flowers weekly from his garden to the boy's grave. Carl moved to the state of Washington in 1980, and married Luella M. Walkley, a former cataloguer and specialist on Ichneumonidae in the Division of Insect Identification (USDA). She died a year later, and he returned to New York state in 1982 to live in Schenectady with a cousin, Elfrieda Geissler. He was physically active through 1986. Although handicapped by occasional cardiac or respiratory problems, he enjoyed daily walks along the Mohawk River and regularly drove his car nearly 250 miles on the New York Thruway several times a year between Schenectady and a vacation home in western New York. He remained in full mental vigor until his death, enjoying occasional long dis-

ance conversations about Bethyilidae, friends in Washington, and the Washington Redskins football team.

Carl was keenly interested in sports throughout his life. During his high school years he was a catcher on the baseball team. At Cornell he participated annually in the 5-mile cross-country run in Ivy League competition, never finishing less than 5th in the race, and once coming in 2nd. He was an active bowler during the late 1920s and early 1930s, a sport in which he was joined by several entomological colleagues. He became particularly proficient at duckpins and maintained a high average. He was so enthusiastic about this sport, that sometimes, playing by himself, he used two adjacent alleys, bowling a frame on one while the pins were being set up in the other alley. An injury to his foot while on the bowling alley necessitated his withdrawal from active sports. After the advent of television he watched various sporting events, particularly football, with great enthusiasm.

Another avocational interest was gardening to which he was very dedicated. He maintained a large garden at his home in suburban Maryland, containing about 100 varieties of hybrid tearoses and other flowers.

Carl was active in a number of professional societies including the Entomological Society of America (Fellow in 1934, Second Vice President in 1938, President in 1946, Honorary Member in 1959), Entomological Society of Washington (President in 1940, Honorary Member in 1957, Honorary President from 1971 until his death), Biological Society of Washington, Society of Systematic Zoologists, Washington Academy of Sciences, and Sigma Xi. He was also a member of the Cosmos Club (1936–1954). The Department of Agriculture recognized his exceptional service by awarding him its Distinguished Service Award in 1951. The eloquent citation for this award paid tribute to him, "For his contributions to science and public welfare as an internationally rec-

ognized insect taxonomist; for his ability to inspire and guide his associates in entomology throughout the world in the acquisition and dissemination of information on destructive and beneficial insects; and for his devotion to duty." The Eastern Branch of the Entomological Society of America honored his professional and societal accomplishments in 1978 by presenting him its L. O. Howard Distinguished Achievement Award.

He was the author of more than a hundred scientific contributions, many of them longer revisionary studies of the highest quality such as his contributions on the genera *Apanteles* (#3), *Meteorus* (#6), *Macrocentrus* (#21), *Orgilus* (#123), *Macroteleia* (#135), *Psilus* and *Coptera* (#137), and his revisions of higher categories such as Microgasterinae (#4), Braconinae (#10), and Euphorinae (#32). His papers in systematics were models of clarity and precision, reflecting his early love of the English language.

His single most important contribution to hymenopterology was the leadership that resulted in the monumental synoptic catalog (#60), "Hymenoptera of America North of Mexico." This catalog, published by USDA as Agriculture Monograph No. 2 in 1951, was the first on the North American fauna since 1887. It was a collaborative effort by a couple of dozen American and Canadian specialists in various groups of Hymenoptera. Carl served as one of three co-editors and prepared in co-authorship the sections on Braconidae and parts of Proctotrupoidea. His stature in the profession ensured the reasonably prompt completion of manuscripts by the 20 collaborators, and his influence within the Department of Agriculture facilitated the allotment of funds from that agency for publication of this indispensable tool of 1400+ pages. Twenty years later, when the volume of publications on North American Hymenoptera necessitated preparation of an updated, computerized edition by the Smithsonian and Ag-

riculture hymenopterists at the Museum, he participated by preparing the sections on Pelecinoidea, Proctotrupoidea and Cera-phronoidea (#116–118).

The impact and stimulation generated by the 1951 catalog were assessed astutely by E. O. Wilson in a review of the revised 1979 edition (*Science*, 208: 721–722, 1980). He stated in part: "In 1951 C. F. W. Muesebeck and a group of associates provided a complete taxonomic record of the species of North America north of Mexico, with summaries of natural history data. Important syntheses always work toward their own obsolescence, and so it was that the Muesebeck catalog stimulated a rush of new systematic and biological studies."

The Entomological Society of Washington dedicated the September 1969 issue of its *Proceedings* to Carl in recognition of his 75th birthday. Dedicatory remarks by three contributors are included here to give an appreciation of the impact of his work in three diverse groups of arthropods.

The late, eminent tick expert, Harry Hoogstraal, honored his work on ticks by describing a new argasid tick, *Ornithodoros (Alectorobius) muesebecki*, from a remote island off the coast of Saudi Arabia. In a deft allusion to Carl's great work on the common names of insects, he christened this bird tick, Muesebeck's Arabian Booby Argasid. Carl, possessed of a wonderful sense of humor, must have given a hearty guffaw when he first read this name. Hoogstraal's dedicatory remarks were: "This new species is dedicated to Mr. C. F. W. Muesebeck on his 75th birthday in token recognition of the selfless and devoted service that he has provided to several generations of entomologists throughout the world. The Jubilee for the ever helpful Curator Muesebeck thus extends to one of the most remote spots of arthropod-inhabited land on the globe."

The renowned flea specialist, Robert Traub, prefaced his description of the new flea genus, *Muesebeckella*, with the following perceptive dedication: "Scientists fa-

miliar with the multitude of significant contributions made by C. F. W. Muesebeck to the study of Hymenoptera may be surprised to see an article on Siphonaptera in a Jubilee Volume dedicated in his honor. It would seem that an entomologist who had accomplished so much in such a difficult field and who also nevertheless somehow managed to serve as an authority on the principles of taxonomy and on the standardization of common names of insects, could surely not find the time to master the systematics of fleas and lice. The fact is, however, that Mr. Muesebeck is expert enough on both of these groups of ectoparasites to have repeatedly provided definitive identifications of obscure species, despite the dearth of taxonomic keys, proper descriptions and illustrations for which at least the Siphonapteran literature is notorious. Even if this were not the case, it would be fitting to include a paper on fleas in this volume because of all that Mr. Muesebeck has done to stimulate students of ectoparasites and to ensure that the U.S. Department of Agriculture and the Smithsonian Institution would always be able to identify specimens and answer queries submitted from all parts of the world. When one considers the serious problems posed over the years by the shortage of funds to support such activities, the true value of Mr. Muesebeck's 'extracurricular' activities becomes apparent."

A fellow hymenopterist, Karl Krombein, dedicated to him the new cuckoo wasp genus, *Muesebeckidium*, and offered these thoughts: "During his many years at the U.S. National Museum, formerly as the head of systematic entomology investigations for the U.S. Department of Agriculture, and presently as an honored Research Associate of the Smithsonian Institution, I have come to know and cherish Carl Muesebeck very highly. His quietly skillful and dynamic leadership of the Insect Identification Division, USDA, brought it to a peak in professional and support strength not equaled before or since. Had it not been for

his effective and tactful direction, an epochal contribution such as the catalog of North American Hymenoptera might not be a reality today. Finally, his warm personal interest in the professional development and well-being of his staff endeared him to all of those privileged to work under his leadership."

In another article in the issue of the *Proceedings* celebrating Carl's 75th birthday, R. H. Nelson, Executive Director Emeritus, Entomological Society of America (ESA), wrote at length of Carl's numerous services to that society. Among other activities in ESA Carl was a member of the small, joint committee that proposed the merger of the original ESA with the American Association of Economic Entomologists to form the present, larger national society representing all of entomology.

All of his professional life Carl had a kindly concern for his associates, and for the friends and neighbors outside of his profession. Always generous in his praise of scientific contributions by others, as late as 1986 he expressed his great delight in receiving the monumental study of the Russian Braconidae by Tobias and his esteem for the quality of the work.

One reviewer of the revised Hymenoptera catalog commented felicitously (*Quart. Rev. Biol.*, 55: 444-445, 1980) that "... all among its users will appreciate and find most fitting its dedication, with admiration and affection, to Mr. C. F. W. Muesebeck, himself a paragon among entomologists." Carl was a gentleman and a gentle man, loved by his friends and close colleagues, and held in affectionate regard and respect by his associates all over the world.

Acknowledgments.—We are grateful to Carl's cousin, Miss Elfrieda Geissler, Schenectady, for sharing with us her recollections of things he had told her about his family and early years. We also thank Victor E. Krantz, Chief of the Natural History Branch of the Photographic Division, SI, for his skillful copying of the photographs from

Miss Geissler that are used in our sketch. Several colleagues, J. F. Gates Clarke, Kenneth W. Cooper, John G. Franclemont, Beth and Arnold Norden, Paul W. Oman, Louise M. Russell, Curtis W. Sabrosky, and Robert Traub were kind enough to comment on a preliminary draft and/or to provide helpful information. Mrs. Isabel T. S. Gardner, Office of the Dean, The Graduate School, provided the available information from Cornell archives on Carl's registration for graduate work.

Karl V. Krombein, *Department of Entomology, Smithsonian Institution, NHB 105, Washington, D.C. 20560.*

Paul M. Marsh, *Systematic Entomology Laboratory, USDA, % Smithsonian Institution, NHB 168, Washington, D.C. 20560.*

Bibliography of Carl F. W. Muesebeck

1. Muesebeck, C. F. W. 1918. Two important introduced parasites of the brown-tail moth. *J. Agric. Res.* 14: 191-206.
2. Muesebeck, C. F. W. 1919. Three new species of Braconidae. *Canad. Entomol.* 51: 113-115.
3. Muesebeck, C. F. W. 1920. A revision of the North American species of ichneumon-flies belonging to the genus *Apanteles*. *Proc. U.S. Natl. Mus.* 58: 483-576.
4. Muesebeck, C. F. W. 1922. A revision of the North American ichneumon-flies belonging to the subfamilies Neoneurinae and Microgasterinae. *Proc. U.S. Natl. Mus.*, Vol. 61, Art. 15, 76 pp.
5. Muesebeck, C. F. W. 1922. *Zygobothria nidiicola*, an important parasite of the brown-tail moth. *Bull. U.S. Dept. Agric.* No. 1088, 9 pp.
6. Muesebeck, C. F. W. 1923. A revision of the North American species of ichneumon-flies belonging to the genus *Meteorus* Haliday. *Proc. U.S. Natl. Mus.*, Vol. 63, Art. 2, 44 pp.
7. Muesebeck, C. F. W. 1925. A revision of the parasitic wasps of the genus *Microbracon* occurring in America north of Mexico. *Proc. U.S. Natl. Mus.* Vol., 67, Art. 8, 85 pp.
8. Muesebeck, C. F. W. 1926. Descriptions of new reared parasitic Hymenoptera and some notes on synonymy. *Proc. U.S. Natl. Mus.*, Vol. 69, Art. 7, 18 pp.
9. Muesebeck, C. F. W. and C. McCann. 1926. A new ichneumon fly of the genus *Apanteles* from the death's head moth *Acerontia styx*, with a note on its life history. *J. Bombay Nat. Hist. Soc.* 31: 726-728.
10. Muesebeck, C. F. W. 1927. A revision of the parasitic wasps of the subfamily Braconinae occurring in America north of Mexico. *Proc. U.S. Natl. Mus.*, Vol. 69, Art. 16, 73 pp.
11. Muesebeck, C. F. W. 1927. New species of chalcid flies parasitic on the gypsy-moth parasite, *Apanteles melanoscelus* (Ratzeburg). *J. Agric. Res.* 34: 331-333.
12. Muesebeck, C. F. W. and S. M. Dohanian. 1927. A study in hyperparasitism, with particular reference to the parasites of *Apanteles melanoscelus* (Ratzeburg). *Bull. U.S. Dept. Agric.* No. 1487, 35 pp.
13. Muesebeck, C. F. W. 1928. A new European species of *Apanteles* parasitic on the gypsy moth. *Proc. Entomol. Soc. Wash.* 30: 8.
14. Muesebeck, C. F. W. 1928. Family Braconidae, pp. 895-920. In M. D. Leonard, ed., *List of the Insects of New York*. Cornell Univ. Agric. Exp. Sta. Mem. No. 101, 1121 pp.
15. Muesebeck, C. F. W. 1929. Two new species of *Apanteles* (Hymenoptera: Braconidae). *Proc. Entomol. Soc. Wash.* 31: 118-120.
16. Muesebeck, C. F. W. 1931. Description of a new genus and eight new species of ichneumon-flies with taxonomic notes. *Proc. U.S. Natl. Mus.*, Vol. 79, Art. 16, 16 pp.
17. Muesebeck, C. F. W. 1931. *Monodontomerus aereus* Walker, both a primary and a secondary parasite of the brown-tail moth and the gypsy moth. *J. Agric. Res.* 43: 445-459.
18. Muesebeck, C. F. W. 1932. The genus *Mesocochus* Schulz (Hymenoptera, Braconidae). *Proc. Biol. Soc. Wash.* 45: 227-230.
19. Muesebeck, C. F. W. 1932. Two new species of *Phanomeris* Foerster (Hymenoptera, Braconidae) parasitic on leaf-mining sawflies. *Proc. Entomol. Soc. Wash.* 34: 81-83.
20. Muesebeck, C. F. W. 1932. Four new North American species of *Bassus* Fabricius (Hymenoptera: Braconidae), with notes on the genotype. *J. Wash. Acad. Sci.* 22: 329-333.
21. Muesebeck, C. F. W. 1932. Revision of the Nearctic ichneumon-flies belonging to the genus *Macrocentrus*. *Proc. U.S. Natl. Mus.*, Vol. 80, Art. 23, 55 pp.
22. Muesebeck, C. F. W. 1932. Two new species of phytophagous Eurytomidae (Hymenoptera: Chalcidoidea). *Proc. Entomol. Soc. Wash.* 34: 109-112.
23. Muesebeck, C. F. W. 1933. Five new hymenopterous parasites of the Oriental fruit moth. *Proc. Entomol. Soc. Wash.* 35: 48-54.
24. Muesebeck, C. F. W. 1933. Seven new species

- of reared Braconidae (Hymenoptera). Proc. Entomol. Soc. Wash. 35: 193-200.
25. Muesebeck, C. F. W. and D. L. Parker. 1933. *Hyposoter disparis* Viereck, an introduced ichneumonid parasite of the gypsy moth. J. Agric. Res. 46: 335-347.
 26. Muesebeck, C. F. W. 1934. Seven new species of Indian Bethyilidae (Hymenoptera). Rec. Indian Mus. 36: 223-232.
 27. Muesebeck, C. F. W. 1935. Synonymical notes on *Ecphyllus* Foerster, with description of one new species (Hym., Braconidae). Proc. Entomol. Wash. 37: 21-24.
 28. Muesebeck, C. F. W. 1935. Three new reared parasitic Hymenoptera, with some notes on synonymy. J. Wash. Acad. Sci. 25: 270-283.
 29. Muesebeck, C. F. W. 1935. On the genus *Onophanes* Foerster, with descriptions of two new related genera (Hymenoptera: Braconidae). Ann. Entomol. Soc. Amer. 28: 241-250.
 30. Muesebeck, C. F. W. 1935. A new species of parasite of *Typhlocyba pomaria* McAtee (Hymenoptera: Bethyilidae). Proc. Entomol. Soc. Wash. 37: 167-168.
 31. Muesebeck, C. F. W. 1935. On two little known genera of Braconidae (Hymenoptera). Proc. Entomol. Soc. Wash. 37: 173-177.
 32. Muesebeck, C. F. W. 1936. The genera of parasitic wasps of the Braconid subfamily Euphorinae, with a review of the Nearctic species. Misc. Publ. U. S. Dept. Agric. No. 241, 36 pp.
 33. Muesebeck, C. F. W. 1937. A new West Indian species of *Mirax* Haliday, parasitic on the coffee leaf-miner (Hymenoptera: Braconidae). Proc. Entomol. Soc. Wash. 39: 139-141.
 34. Muesebeck, C. F. W. 1937. Three new Brazilian species of *Heterospilus* (Hym., Braconidae), parasites of *Gasterocercodes gossypii* Pierce. Rev. Entomol. 7: 8-11.
 35. Muesebeck, C. F. W. 1938. Two reared North American species of the genus *Stantonia* Ashmead (Hymenoptera: Braconidae). Proc. Entomol. Soc. Wash. 40: 89-91.
 36. Muesebeck, C. F. W. 1938. New species and synonymy in the genus *Macrocentrus* (Hymenoptera: Braconidae). Proc. Entomol. Soc. Wash. 40: 170-172.
 37. Muesebeck, C. F. W. 1938. Three new reared species of *Apanteles* from California (Hymenoptera: Braconidae). Proc. Entomol. Soc. Wash. 40: 201-204.
 38. Muesebeck, C. F. W. 1938. The genus *Dendrosoter* Wesmael in the United States (Hymenoptera: Braconidae). Proc. Entomol. Soc. Wash. 40: 281-287.
 39. Muesebeck, C. F. W. 1939. Three new hymenopterous parasites of the Lemna fly. Proc. Entomol. Soc. Wash. 41: 58-62.
 40. Muesebeck, C. F. W. 1939. A new species of *Heterospilus* parasitic on an injurious anobiid (Hymenoptera: Braconidae). Proc. Entomol. Soc. Wash. 41: 62-63.
 41. Muesebeck, C. F. W. 1939. Five new species of *Meteorus* (Hymenoptera: Braconidae). Proc. Entomol. Soc. Wash. 41: 83-87.
 42. Muesebeck, C. F. W. 1939. A new reared *Meteorus* from Tasmania (Hymenoptera: Braconidae). Proc. Entomol. Soc. Wash. 41: 172-173.
 43. Muesebeck, C. F. W. 1939. A new mealybug parasite (Hymenoptera: Scelionidae). Canad. Entomol. 71: 158-160.
 44. Muesebeck, C. F. W. 1939. The North American species of the genus *Laelius* (Hymenoptera: Bethyilidae). Proc. Biol. Soc. Wash. 52: 171-176.
 45. Muesebeck, C. F. W. 1940. Two new reared species of *Bassus* (Hymenoptera: Braconidae). Proc. Entomol. Soc. Wash. 42: 91-93.
 46. Muesebeck, C. F. W. 1940. Two new hymenopterous parasites of sugar-cane borers in India. Proc. Entomol. Soc. Wash. 42: 120-122.
 47. Muesebeck, C. F. W. 1941. Two new reared species of *Doryctes* (Hymenoptera: Braconidae). Proc. Entomol. Soc. Wash. 43: 149-152.
 48. Muesebeck, C. F. W. 1941. A new ant parasite (Hymenoptera, Braconidae). Bull. Brooklyn Entomol. Soc. 36: 200-201.
 49. Muesebeck, C. F. W. 1942. Common names. J. Econ. Entomol. 34: 862-863.
 50. Muesebeck, C. F. W. 1942. Fundamental taxonomic problems in quarantine and nursery inspection. J. Econ. Entomol. 35: 753-758.
 51. Muesebeck, C. F. W. 1942. Two new species of *Allotropa* (Platygastridae, Serphoidea) parasitic on the Comstock mealybug. Bull. Brooklyn Entomol. Soc. 37: 170-173.
 52. Muesebeck, C. F. W. 1945. On the interpretation of Article 23 of the International Code in cases where a species is originally described as being both in a genus and in a subgenus and later the subgenus is elevated to generic rank and the species is transferred to the genus so erected. Bull. Zool. Nomen., August 1945, p. 92.
 53. Muesebeck, C. F. W. 1946. A new *Apanteles* from Hawaii (Hym., Braconidae). Proc. Hawaiian Entomol. Soc. 12: 615-616.
 54. Muesebeck, C. F. W. 1947. Two new species of *Apanteles* from California (Hymenoptera: Braconidae). Pan-Pac. Entomol. 23: 21-24.
 55. Muesebeck, C. F. W. 1949. A new flightless *Phaenopria* (Hymenoptera: Diapriidae). Canad. Entomol. 81: 234-235.
 56. Muesebeck, C. F. W. 1949. Two new species of *Opus* from rose hips. Canad. Entomol. 81: 254-256.
 57. Muesebeck, C. F. W. 1950. Two new genera

- and three new species of Braconidae. *Proc. Entomol. Soc. Wash.* 52: 77–81.
58. Muesebeck, C. F. W. 1950. Common names of insects approved by the American Association of Economic Entomologists. *J. Econ. Entomol.* 43: 117–138.
 59. Muesebeck, C. F. W., A. B. Gahan, and E. R. Sasser. 1951. Sievert Allen Rohwer, 1888–1951 [obituary]. *Proc. Entomol. Soc. Wash.* 53: 227–230.
 60. Muesebeck, C. F. W., K. V. Krombein, and H. K. Townes [eds.]. 1951. Hymenoptera of America North of Mexico—Synoptic Catalog. U.S. Dept. Agric., Agric. Monog. 2, 1420 pp.
 61. Muesebeck, C. F. W. and L. M. Walkley. 1951. Family Braconidae, pp. 90–184. *In* C. F. W. Muesebeck et al., eds., Hymenoptera of America North of Mexico—Synoptic Catalog. U.S. Dept. Agric., Agric. Monog. 2, 1420 pp.
 62. Muesebeck, C. F. W. and L. M. Walkley. 1951. Superfamily Bethyloidea, pp. 726–734. *In* C. F. W. Muesebeck et al., eds., Hymenoptera of America North of Mexico—Synoptic Catalog. U.S. Dept. Agric., Agric. Monog. 2, 1420 pp.
 63. Muesebeck, C. F. W. 1952. What kind of insect is it? Yearbook of Agriculture for 1952, pp. 43–55.
 64. Muesebeck, C. F. W. 1952. Progress in insect classification. Yearbook of Agriculture for 1952, pp. 56–60.
 65. Muesebeck, C. F. W. 1953. Three new reared Braconidae (Hymenoptera). *Proc. Entomol. Soc. Wash.* 55: 149–151.
 66. Muesebeck, C. F. W. 1953. Scientific names of the body and head lice. *J. Econ. Entomol.* 46: 524.
 67. Muesebeck, C. F. W. 1953. National entomological societies merge. *Science* 117: 546–547.
 68. Muesebeck, C. F. W. 1954. Three new mealybug parasites of the genus *Allotropia* (Hymenoptera: Platygasteridae). *Bull. Brooklyn Entomol. Soc.* 49: 18–21.
 69. Muesebeck, C. F. W. 1954. Some braconid parasites of the pink bollworm *Pectinophora gossypiella* (Saunders). *Boll. Lab. Entomol. Agric. Filippo Silvestri* 33: 57–68.
 70. Muesebeck, C. F. W. 1955. New reared Braconidae from Trinidad (Hymenoptera). *Proc. Entomol. Soc. Wash.* 57: 161–164.
 71. Muesebeck, C. F. W. 1955. A remarkable new species of *Perilitus* from Mexico (Hymenoptera: Braconidae). *Proc. Biol. Soc. Wash.* 68: 143–144.
 72. Shands, W. A., G. W. Simpson, F. S. Roberts, and C. F. W. Muesebeck. 1955. Parasites of potato-infesting aphids and of some other aphids in Maine. *Proc. Entomol. Soc. Wash.* 57: 131–136.
 73. Muesebeck, C. F. W. 1956. New synonymy in the Braconidae. *Proc. Entomol. Soc. Wash.* 58: 34.
 74. Muesebeck, C. F. W. 1956. A braconid parasite of a psocid (Hymenoptera). *Proc. Entomol. Soc. Wash.* 58: 148–149.
 75. Muesebeck, C. F. W. 1956. Two new braconid parasites of the avocado looper (Hymenoptera: Braconidae). *Pan-Pac. Entomol.* 32: 25–28.
 76. Muesebeck, C. F. W. 1956. Two new parasites of the yellow clover aphid and the spotted alfalfa aphid (Hymenoptera: Braconidae). *Bull. Brooklyn Entomol. Soc.* 51: 25–28.
 77. Muesebeck, C. F. W. 1956. On *Opius ferrugineus* Gahan and two closely similar new species (Hymenoptera: Braconidae). *Entomol. News* 67: 99–102.
 78. Muesebeck, C. F. W. 1956. New generic synonymy in the Scelionidae (Hymenoptera). *Proc. Entomol. Soc. Wash.* 58: 24.
 79. Muesebeck, C. F. W. and L. M. Walkley. 1956. Type species of the genera and subgenera of parasitic wasps comprising the superfamily Proctotrupoidea (order Hymenoptera). *Proc. U.S. Natl. Mus.* 105: 319–419.
 80. Muesebeck, C. F. W. 1957. New World *Apanteles* parasitic on *Diatraea* (Hymenoptera: Braconidae). *Entomol. News* 68: 19–25.
 81. Muesebeck, C. F. W. 1957. Four new species of *Eubadizon* from Western United States (Hymenoptera: Braconidae). *Bull. Brooklyn Entomol. Soc.* 52: 51–56.
 82. Muesebeck, C. F. W. 1957. Robert Asa Cushman, 1880–1957 [obituary]. *Proc. Entomol. Soc. Wash.* 59: 247–248.
 83. Shenefelt, R. D. and C. F. W. Muesebeck. 1957. Ashmead's *Meteoridae* (Hymenoptera: Braconidae). *Proc. Entomol. Soc. Wash.* 59: 129–134.
 84. Muesebeck, C. F. W. 1958. Family Braconidae, pp. 18–36. *In* F. V. Krombein et al., eds., Hymenoptera of America North of Mexico—Synoptic Catalog. U.S. Dept. Agric., Agric. Monog. 2, Suppl. 1, 305 pp.
 85. Muesebeck, C. F. W. 1958. Superfamily Proctotrupoidea, pp. 88–94. *In* K. V. Krombein et al., eds., Hymenoptera of America North of Mexico—Synoptic Catalog. U.S. Dept. Agric., Agric. Monog. 2, Suppl. 1, 305 pp.
 86. Muesebeck, C. F. W. 1958. Three new aphid parasites from the Pacific coast (Hymenoptera: Braconidae, Aphidiinae). *Entomol. News* 69: 141–145.
 87. Muesebeck, C. F. W. 1958. New Neotropical wasps of the family Braconidae (Hymenoptera) in the U.S. National Museum. *Proc. U.S. Natl. Mus.* 107: 405–461.
 88. Muesebeck, C. F. W. and B. R. Subba Rao. 1958. A new braconid parasite of *Hymenia re-*

- curvalis* (Fabricius). Indian J. Entomol. 20: 27–28.
89. Muesebeck, C. F. W. 1959. New reared species of *Lygocerus* Foerster (Hymenoptera: Ceraphronidae). Entomol. News 70: 91–96.
 90. Muesebeck, C. F. W. 1960. New reared Neotropical species of *Rogas* Nees (Hymenoptera: Braconidae). Entomol. News 71: 257–261.
 91. Muesebeck, C. F. W. 1960. A fossil braconid wasp of the genus *Ecphyllus* (Hymenoptera). J. Paleont. 34: 495–496.
 92. Cory, E. N. and C. F. W. Muesebeck. 1960. Arthur Burton Gahan, 1880–1960 [obituary]. Proc. Entomol. Soc. Wash. 62: 198–204.
 93. Muesebeck, C. F. W. 1961. A new *Opius* and two new species of *Microctonus* (Hymenoptera: Braconidae). Bull. Brooklyn Entomol. Soc. 56: 57–61.
 94. Muesebeck, C. F. W. 1961. A new Japanese *Trichopria* parasitic on the house fly (Hymenoptera: Diapriidae). Mushi 35: 1–2.
 95. Muesebeck, C. F. W. 1961. Annual Review of Entomology, volume 6, 1961 [book review]. Bull. Entomol. Soc. Amer. 7: 193.
 96. Muesebeck, C. F. W. 1962. A new Hawaiian *Opius* from a leaf-mining pest of beans (Hymenoptera: Braconidae). Proc. Hawaiian Entomol. Soc. 18: 289–290.
 97. Muesebeck, C. F. W. 1962. Annual Review of Entomology, volume 7, 1962 [book review]. Bull. Entomol. Soc. Amer. 8: 93.
 98. Muesebeck, C. F. W. 1963. Six new reared species of *Bracon* (Hymenoptera: Braconidae). Entomol. News 74: 157–165.
 99. Muesebeck, C. F. W. 1963. Host relationships of the Euphorini (Hymenoptera: Braconidae). Proc. Entomol. Soc. Wash. 65: 300.
 100. Muesebeck, C. F. W. 1963. A new ceraphronid from cretaceous amber (Hymenoptera: Proctotrupeoidea). J. Paleont. 37: 129–130.
 101. Muesebeck, C. F. W. 1963. A platygasterid parasite of certain wasp larvae (Hymenoptera: Proctotrupeoidea, Platygasteridae). Beitr. Entomol. 13: 391–394.
 102. Muesebeck, C. F. W. 1963. Annual Review of Entomology, volume 8, 1963 [book review]. Bull. Entomol. Soc. Amer. 9: 120.
 103. Muesebeck, C. F. W. 1964. Identity of the genus *Miocolus* Foerster (Hymenoptera: Braconidae). Proc. Entomol. Soc. Wash. 66: 88.
 104. Muesebeck, C. F. W. 1964. Insects of Campbell Island. Hymenoptera: Braconidae. Pac. Ins. Monogr. 7: 494–495.
 105. Muesebeck, C. F. W. 1964. Annual Review of Entomology, volume 9, 1964 [book review]. Bull. Entomol. Soc. Amer. 10: 115.
 106. Muesebeck, C. F. W. 1965. Two new braconid parasites of the spruce budworm (Hymenoptera). Entomol. News 76: 71–74.
 107. Muesebeck, C. F. W. 1965. A new diapriid (Hymenoptera: Diapriidae) from termite nests from South Africa. J. Entomol. Soc. S. Afr. 27: 188–190.
 108. Muesebeck, C. F. W. 1965. Annual Review of Entomology, volume 10, 1965 [book review]. Bull. Entomol. Soc. Amer. 11: 95–96.
 109. Shands, W. A., G. W. Simpson, C. F. W. Muesebeck, and H. W. Wane. 1965. Parasites of potato-infesting aphids in northeastern Maine. Maine Agric. Exp. Sta. Bull. T19, 77 pp.
 110. Muesebeck, C. F. W. 1966. Annual Review of Entomology, volume 11, 1966 [book review]. Bull. Entomol. Soc. Amer. 12: 233.
 111. Muesebeck, C. F. W. 1967. *Agathis metzneria* Muesebeck, new species. In C. Juhala, ed., Notes on parasitic Hymenoptera associated with a gelechiid moth, *Metzneria lappella*, in the common burdock, and description of a new species of *Agathis* (Braconidae). Ann. Entomol. Soc. Amer. 60: 95–97.
 112. Muesebeck, C. F. W. 1967. Three new south-eastern parasitic Hymenoptera. Fla. Entomol. 50: 57–61.
 113. Muesebeck, C. F. W. 1967. A new braconid parasite of the potato tuberworm (Hymenoptera). Proc. Entomol. Soc. Wash. 69: 177–178.
 114. Muesebeck, C. F. W. 1967. Three new reared Braconidae (Hymenoptera). Entomol. News 78: 135–139.
 115. Muesebeck, C. F. W. 1967. Annual Review of Entomology, volume 12, 1967 [book review]. Bull. Entomol. Soc. Amer. 13: 134.
 116. Muesebeck, C. F. W. 1967. Family Braconidae, pp. 27–60. In K. V. Krombein and B. D. Burks, eds., Hymenoptera of America North of Mexico—Synoptic Catalog. U.S. Dept. Agric., Agric. Monogr. 2, Suppl. 2, 584 pp.
 117. Muesebeck, C. F. W. 1967. Superfamily Pelecinioidea, p. 285. In K. V. Krombein and B. D. Burks, eds., Hymenoptera of America North of Mexico—Synoptic Catalog. U.S. Dept. Agric., Agric. Monogr. 2, Suppl. 2, 584 pp.
 118. Muesebeck, C. F. W. and L. Masner. 1967. Superfamily Proctotrupeoidea, pp. 285–305. In K. V. Krombein and B. D. Burks, eds., Hymenoptera of America North of Mexico—Synoptic Catalog. U.S. Dept. Agric., Agric. Monogr. 2, Suppl. 2, 584 pp.
 119. Muesebeck, C. F. W. 1968. Aphid parasites of Czechoslovakia, by P. Stary [book review]. Bull. Entomol. Soc. Amer. 14: 80.
 120. Masner, L. and C. F. W. Muesebeck. 1968. The types of Proctotrupeoidea (Hymenoptera) in the

- United States National Museum. U.S. Natl. Mus. Bull. No. 270, 143 pp.
121. Muesebeck, C. F. W. 1969. Annual Review of Entomology, volume 14, 1969 [book review]. Bull. Entomol. Soc. Amer. 15: 382–383.
 122. Muesebeck, C. F. W. 1970. A new mealybug parasite from Japan. Proc. Entomol. Soc. Wash. 72: 318–319.
 123. Muesebeck, C. F. W. 1970. The Nearctic species of *Orgilus* Haliday (Hymenoptera: Braconidae). Smith. Contr. Zool. No. 30, 104 pp.
 124. Muesebeck, C. F. W. 1970. Annual Review of Entomology, volume 15, 1970 [book review]. Bull. Entomol. Soc. Amer. 16: 130–131.
 125. Muesebeck, C. F. W. 1971. Annual Review of Entomology, volume 16, 1971 [book review]. Bull. Entomol. Soc. Amer. 17: 291–292.
 126. Burks, B. D., C. F. W. Muesebeck, and R. D. Gordon. 1971. Edward Albert Chapin, 1894–1969 [obituary]. Proc. Entomol. Soc. Wash. 73: 99–104.
 127. Muesebeck, C. F. W. 1972. On the identity of *Agonophorus* Dahlbom (Proctotrupoidea, Diapriidae). Proc. Entomol. Soc. Wash. 74: 131.
 128. Muesebeck, C. F. W. 1972. Nearctic species of Scelionidae (Hymenoptera: Proctotrupoidea) that parasitize the eggs of grasshoppers. Smith. Contr. Zool. No. 122, 33 pp.
 129. Muesebeck, C. F. W. 1972. A new reared species of *Trichopria* (Proctotrupoidea, Diapriidae). Entomol. News 83: 141–143.
 130. Muesebeck, C. F. W. 1972. Annual Review of Entomology, volume 17, 1972 [book review]. Bull. Entomol. Soc. Amer. 18: 156–157.
 131. Cushman, H. G., C. F. W. Muesebeck, and G. B. Vogt. 1972. Warren Samuel Fisher, 1878–1971 [obituary]. Proc. Entomol. Soc. Wash. 74: 344–352.
 132. Muesebeck, C. F. W. 1973. Annual Review of Entomology, volume 18, 1973 [book review]. Bull. Entomol. Soc. Amer. 19: 125–126.
 133. Muesebeck, C. F. W. 1974. A new Nearctic species of *Telenomus* (Hymenoptera: Proctotrupoidea, Scelionidae). Folia Entomol. Hung. 27: 135–137.
 134. Muesebeck, C. F. W. 1974. Annual Review of Entomology, volume 19, 1974 [book review]. Bull. Entomol. Soc. Amer. 20: 271–272.
 135. Muesebeck, C. F. W. 1977. The parasitic wasps of the genus *Macroteleia* Westwood of the New World (Hymenoptera, Proctotrupoidea, Scelionidae). U.S. Dept. Agric. Tech. Bull. No. 1565, 57 pp.
 136. Muesebeck, C. F. W. 1978. A new egg parasite (Hymenoptera: Scelionidae) of the elm spanworm, *Ennomos subsignarius* (Lepidoptera: Geometridae). Proc. Entomol. Soc. Wash. 80: 91–93.
 137. Muesebeck, C. F. W. 1980. The Nearctic parasitic wasps of the genera *Psilus* Panzer and *Cop-tera* Say (Hymenoptera, Proctotrupoidea, Diapriidae). U.S. Dept. Agric. Tech. Bull. No. 1617, 71 pp.